What is claimed is:

1. A peptide that selectively binds to colon cancer cells.

2. The peptide according to claim 1 wherein said peptide is a cyclic peptide.

3. The peptide according to claim 2 wherein said peptide comprises at least two cysteine amino acid residues, and wherein said peptide is cyclized via a disulfide bond between said two cysteine amino acid residues.

4. The peptide according to claim 1, wherein said peptide has the formula:

A-X1-X2-X3-X4-X5-X6-X7-X8-X9-B,

wherein X1-X9 each are an amino acid, wherein A and B are absent or are amino acids or peptides containing up to 6 amino acids, and wherein amino acids X2, X3, X4, and X5 may be the same or different and each optionally may be absent.

5. The peptide according to claim 4, wherein X1 and X9 are cys, and the peptide contains a disulfide bond between the side chains of X1 and X9.

6. The peptide according to claim 5 wherein:

X2 is selected from the group consisting of pro, ala, val, asp, gln, phe, and ile;

X3 is selected from the group consisting of ile, leu, glu, met, pro, and his;

X4 is selected from the group consisting of glu, asp, his, arg, pro, ala, lys, gln, and ser;

X5 is selected from the group consisting of asp, glu, ser, phe, gln, met, and val;

X6 is selected from the group consisting of arg, his, gln, phe, ser, and pro;

X7 is selected from the group consisting of pro, tyr, arg, and trp; and

X8 is selected from the group consisting of met, ser, leu, and arg.

7. The peptide according to claim 6, wherein the sequence X6-X8 is arg-pro-met.

8. The peptide according to claim 7, wherein X2 is pro; X3 is selected from the group consisting of ile and leu; X4 is selected from the group consisting of glu, asp, and arg; and X5 is selected from the group consisting of asp and glu.

9. A peptide according to claim 4, wherein X1 and X9 are cys, and wherein amino acids X2-X8, respectively, have a sequence selected from the group consisting of:

ALLPNKT	AQPLKQN	SMSSHRW	APSQRAQ	AYPYWLY	SNSQDQN
ELNAAHT	DHPVPWR	SPQSQPM	ETGYSFR	DLREHTL	SRLDSPF
ETLSPRD	DRIGARQ	SYDYAKH	FESQSRL	FESQSRL	THLMPLT
FMKTLSN	GTATLHW	TKSLLLA	HQLYRGL	HDSLYRA	TSPLPSQ
IQGSGST	HNPPRPQ	TSSTPKA	KASMKSP	HNVRFPN	TTRGPST
KATAMNS	HQSSPQL	VSLQPMT	LAHASNS	HQTNPNE	VSNQIAN
LAKVPAS	HSSHTHQ	VTTLNLT	MLPHGRT	IDPSLGL	NFNSRAS
IHPVPWR	NGTSRIQ	KAESPME	NLKQPEH	KATMTAT	NRALHSY
KDKDNLP	NSARWSV	KLVPTHQ	NSHDPEN	KNERAYL	NSKDPGT
KNLTHKH	NVTWGDT	KPTLPLS	PATPLKF	KQHHVTE	PKGSGMN
KQPTSNY	PNQGAYV	KSPSSLQ	PPAHHPN	KTPIPKI	QLPRSQS
KTTHPAL	QQSLSLI	LHMHQHI	QTPSLRL	LKQHWYS	SAHHPHA
LLPLAAP	SHQDPSL	LPHSQAH	SLSQPFR	LPSKFSH	SSRPPWN
LSASTLM	THSHKKP	LSPISLQ	TNPMRLH	LTPEPQY	TQLPVSW
NASLMSV	TTWWAST	NATQWQH	VHKFKPF	NGSYVWR	NPNSNDM
NSMPLHA	NWQPATH	PFGMVHT	PHPWPGK	PKMLGAA	PLTPTTV
PPHTLGL	PQELHPN	PSNETTQ	PSTAELA	PSYSTSY	PVSNLLQ
QPPMFYS	QPQSQPM	QTTPPFL	QWAALRP	and SLRTAAA.	

10. A composition comprising at least two peptides according to claim 9.

11. A cyclic peptide comprising the sequence cys-pro-ile-glu-asp-arg-pro-met-cys, wherein said peptide comprises a disulfide bond between the cys side chains.

12. A pharmaceutical preparation comprising a peptide or composition according to claim 1in a pharmaceutically acceptable sterile vehicle.

13. A diagnostic composition comprising a peptide or mixture of peptides according to claim 1, wherein said peptide or peptides are conjugated to a detectable label.

14. A composition according to claim 13, wherein said detectable label is a fluorescent moiety or a radioactive label.

15. A method of diagnosing the presence of colon tumor cells in a patient comprising the steps of administering to said patient an effective amount of a diagnostic composition according to claim 13, allowing said diagnostic composition to bind to colon tumor cells, and detecting binding of said composition to said colon tumor cells.

16. A method of diagnosing the presence of colon tumor cells in a patient comprising the steps of contacting a sample of colon cells obtained from said patient with a diagnostic composition according to claim 13, and detecting binding of said composition to colon tumor cells.

17. The method according to claim 16, wherein said method is non-invasive.

18. The method according to claim 17, wherein said sample of colon cells is obtained from fecal material.

19. A composition comprising one or more peptides according to claim 1, wherein each of said peptides is conjugated to a therapeutic agent.

20. The composition according to claim 19, wherein said therapeutic agent is a cytotoxic agent.

21. A method of treating a patient suffering from colon cancer, comprising administering to said patient a composition according to claim 19.

22. A method for treating a patient suffering from a colon-derived cancer, comprising administering to said patient a composition according to claim 19.

23. A method for blocking a receptor on a colon tumor cell or a colon tumor-derived cell in a patient containing said colon tumor or sad colon tumor-derived cells, comprising the

steps of administering to said patient a composition according to claim 19, and allowing the peptide or peptides in said composition to selectively or specifically bind to said receptor.

24. A method of identifying a homing molecule that homes to a marker on a colon tumor cell, comprising the steps of contacting in vitro a substantially purified population of a tumor cell line with one or more peptide molecules, and observing the specific or selective binding of a molecule to the tumor cell compared to a non-tumor colon cell, wherein the presence of specific binding identifies the peptide molecule as a homing molecule that homes to said colon tumor cell.

25. A purified polypeptide represented by the formula:

A-cys-X1-X2-X3-X4-arg-pro-met-cys-B, wherein X1-X4 each are an amino acid, and wherein A and B are absent or are amino acids or peptides containing up to 6 amino acids.